

Seaweed vs alginate enters obesity debate

'Seaweed can halt obesity,' the *Daily Express*' front page shouted in March.

The report referred to research at Newcastle University which suggested that an extract of seaweed called 'alginate' might absorb fat from the body if added to food.

However, alginate is not seaweed at all, but a sterile, white powder manufactured from the extract. And closer scrutiny revealed that it has only been tested in a laboratory 'artificial gut'!

By contrast, four years of government-sponsored research at the Centre for Food Innovation at Sheffield Hallam University has concluded that a particular wild seaweed can replace up to 50% of salt in manufactured foods^{1,2} and, most recently, may also be an effective ingredient in the fight against obesity.³

Simon Ranger, MD of Seagreens, a leading seaweed supplier, believes a polarization may be taking place in food science. 'The 'alginate' approach is conventional and still preferred by 'big pharma' producers and many food technologists. Yet its proposed use bears no relation to its natural and beneficial occurrence in seaweed and there are many in the food industry and retailing who want a new and natural approach,' he says.

'They hope the alginate will remove fats, but it may also remove valuable minerals. They even say it will "allow people to keep eating junk foods"! It would increase the fibre content of pies, burgers, cakes and other high-fat foods, yet they have no idea what effect such an unnatural level of alginate will have in the body. The 'big pharma' companies are working on

salt replacements, too, and most of these are no better than the same old white powders.'

Unrefined sea salt and whole seaweed contain a natural balance of minerals and trace elements, more complex in their effects and benefits [see main article] than the mineral-deficient, additive- and sodium-rich salts like sodium chloride in processed foods, which are linked to cardiovascular disease.

Ranger is demonstrating that human food seaweed has an equally useful role in salt replacement and obesity and is conducting a unique whole food approach to research through his non-profit Seaweed Health Foundation.

References

1. Fairclough A, Cliffe DE. The potential for the use of Seagreens® wild wrack seaweed as a bacteriostat and its effect on shelf-life, Sheffield Hallam University, March, 2008.
2. Fairclough A, Mahadevan K. A replacement for sodium chloride in bread products, Sheffield Hallam University, February, 2010.
3. Hall AC et al. Seaweed (*Ascophyllum nodosum*) enriched bread is acceptable to consumers, Centre for Food Innovation, Sheffield Business School, May, 2010.

Vitamin D level linked to cognitive function in elderly

US Agricultural Research Service (ARS)-funded scientists have produced more evidence of a link between vitamin D and cognitive function in the elderly.

The latter is measured by the level at which the brain is able to manage and use available information for activities of daily life. Alzheimer's disease affects about 47 percent of US adults aged 85 or older so identifying nutritional factors that lower cognitive dysfunction and help preserve independent living provides economic and public health benefits, say the authors.

Metabolic pathways for vitamin D have been found in the hippocampus and cerebellum areas of the brain involved in planning, processing and forming new memories, suggesting that vitamin D may be implicated in cognitive processes.

The study involved more than 1,000 participants receiving home care. The researchers evaluated associations between measured vitamin D blood concentrations and neuropsychologi-

cal tests. Elders requiring home care have a higher risk of not getting enough vitamin D because of limited sunlight exposure and other factors.

The participants, ages 65 to 99 years, were grouped by their vitamin D status, which was categorized as 'deficient', 'insufficient', or 'sufficient'. Only 35 percent had sufficient vitamin D blood levels. They had better cognitive performance on the tests than those in the deficient and insufficient categories, particularly on measures of 'executive performance', such as cognitive flexibility, perceptual complexity and reasoning. The associations persisted after considering other variables that could affect cognitive performance.

Buell JS et al. *J Gerontol A Biol Med Sci* 64A (8): 888-95.

Welsh Health Show

This takes place on 13/14 November at the Mercure Holland House Hotel, Cardiff. Details: 01446 796065 www.visionforliving.co.uk

Daily vitamin D intake too low

Official guidance on vitamin D intake is far too low for optimal health, a leading researcher has warned.

Dr William Grant, director of the Sunlight, Nutrition, and Health Research Center (www.sunarc.org), based in California, has warned that the current dietary guideline, approximately 400 iu/day in both the US and UK, is based on the amount in a spoonful of cod liver oil to prevent rickets.

'With whole-body exposure to the sun, one can make at least 10,000 iu/day in a short time,' Grant said. 'Adverse effects such as hypercalcemia have been found in general only for 20-40,000 iu/day for very long periods.'

For most people Grant recommends a daily intake of 2,000 iu a day for people with light skin, 3,000 iu daily for those with very dark skin and 6,000 iu daily for pregnant or lactating women.

For optimal vitamin D production from sunlight, Grant recommends exposing 'as much of the body as possible without sunscreen near solar noon when one's shadow is shorter than one's height, for 10-30 minutes depending on skin pigmentation, being careful not to turn pink or red or burn.'